



NEIGHBORHOOD TRAFFIC CALMING GUIDE

Town of Herndon, Virginia

Prepared by the Town of Herndon Traffic
Engineering Improvement Committee
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STOP NEIGHBORHOOD SPEEDING

A little extra speed makes a big impact.

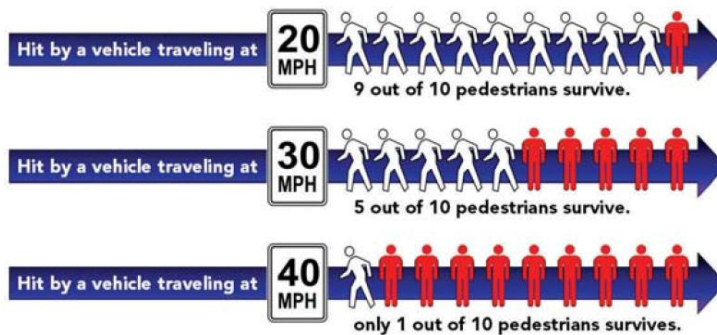


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INTRODUCTION

Traffic calming is the combination of physical and visual controls that reduce negative effects of excess motor vehicle speed, alter driver behavior and improve conditions for non-motorized street users.

In 1996, Herndon created a traffic engineering improvement committee (TEIC) to evaluate inquiries, comments, and complaints received from citizens concerning the management of traffic in town. Traffic calming was a fundamental element of the charter of the TEIC committee and continues today as an important tool for maximizing road safety. TEIC meets regularly to address traffic management problems and is comprised of police officers, transportation planners, traffic engineers and other town staff that offer a wide range of experience on transportation issues.

This guide outlines Herndon's policy and procedures by which citizens can request traffic calming measures in their neighborhoods. For purposes of this guide, traffic calming shall be designed to slow down vehicles traveling on public local residential streets, although certain collector streets that have characteristics of local residential streets may also qualify for traffic calming measures. Concerns regarding major arterial streets such as Elden Street and Herndon Parkway will be directed to the Department of Public Works (DPW) or Herndon's Police Department as appropriate.

TRAFFIC CALMING PROCESS

The traffic calming process has four major components: eligibility, education, enforcement, and engineering. Requests for traffic calming on neighborhood streets can come from civic associations or from citizens where no civic association exists.

Typically, requests to calm traffic involve concerns with vehicle speed. Therefore, as a first step, requests go to the Police Department (non emergency phone number 703-435-6846).

The request should include:

- street segment where speeding exists
- time of day speeding occurs
- type of vehicle (car, truck, bus, etc)
- perceived dangers to pedestrians, bicyclists and local residents

ELIGIBILITY

For a street to qualify for traffic calming, the criteria below must be met:

- Limited to two-lane public residential local / collector streets posted 25 mph
And one or more of the following:
- Traffic speed: 85th percentile speed is equal to or greater than 30 mph
- Accident history of at least 2 accidents in the past 12 months
- Enforcement history must show more than 15 traffic summonses issued in 10 hours of enforcement or 30 summonses in the most recent 6 months

A traffic volume/ speed study will be conducted to determine if the data supports the complaint. Data collection is normally performed on weekdays, September to May when public school is in session. Other considerations include proximity to schools, active pedestrian areas, availability of sidewalks, parking, etc. If the study finds that the request for traffic calming meets the eligibility criteria, then education and police enforcement through the *Traffic Safety Watch Program* will be initiated before undertaking more elaborate engineering solutions.

Streets that fail to meet the criteria are not eligible for traffic calming initiatives and the complainant(s) will be contacted and advised. Upon notification, a two year waiting period is required for re-evaluation; however, TEIC may waive the waiting period if it finds significant changes emerging in the study area.

Depending on complexity, expected timelines for speed study analyses, education and enforcement could take 1 to 3 months (when public school is in session) to assess results. An additional 1 to 3 months is estimated for TEIC to engineer and implement minor non physical controls. After installation, traffic speeds and volumes would be re-analyzed in the following 12 months to compare with those taken prior and may indicate whether or not adjustments are necessary. Generally, in place minor improvements will be assessed for a year to fully gauge their impact before major controls are considered.

TRAFFIC SAFETY WATCH PROGRAM

The Traffic Safety Watch Program (TSWP) is a multi-step program which encourages residents to take an active part in addressing neighborhood traffic issues. The TSWP, modeled after the Neighborhood Watch Program, utilizes groups of organized citizens to work with law enforcement to keep a trained eye and ear on their communities, while demonstrating their presence day and night. Activities of the TSWP include monitoring vehicles traveling faster than the posted speed limit, traffic volume, re-occurring traffic accidents, and pedestrian safety. The goal of TSWP is to significantly reduce or eliminate issues that compromise traffic safety.

TSWP Parameters and Process

- Complaint received and documented in a police report.
 - Community Complaint
 - Government referral
- Information gathering
 - Interview complainant
 - Speed and traffic studies
 - Accidents analysis, summonses issued

EDUCATION

Education is the first step for eligible streets and is comprised of several options the police use to raise neighborhood and motorist awareness about traffic safety concerns. Raising neighborhood and driver awareness may significantly reduce or eliminate the identified problem.

Education options include:

- Literature distribution – stopping of vehicles traveling 4 mph or more over the posted speed limit and issuing the drivers a warning along with an educational handout (Speed is Lethal). A survey form will also be completed.
- Speed trailers - used to educate and raise awareness by displaying the speed of the motorist, thereby promoting a change in driving behavior.
- Speed Watch - a speed monitoring program usually conducted by members of the Herndon Police Citizens Support Team (HPCST). Speeding vehicles' license numbers are recorded and a warning letter for any vehicle traveling 4 mph or more over the posted speed limit will be sent a warning letter- not a ticket- from the police department informing them of the violation and requesting that they obey posted speed limits.
- Community involvement - upon request, neighborhood signs stating “RESPECT OUR STREET – TRAFFIC SAFETY WATCH” or “ZERO SPEEDING TOLERANCE – TRAFFIC SAFETY WATCH” are available for residents to place in their front yards subject to Herndon Zoning temporary sign regulations.

ENFORCEMENT

Enforcement is another tool/option to address traffic safety concerns. While education of the motorist through heightened awareness may be all that is needed for most neighborhoods, some areas may require the police to monitor traffic safety concerns and enforce as appropriate.

ENGINEERING

Engineering is an option used only when education and enforcement do not reduce or eliminate the traffic safety concern. All streets meeting the eligible criteria will be forwarded for Traffic Engineering Improvement Committee review and a traffic calming recommendation. TEIC then determines the appropriate type and cost of traffic calming measures with the greatest likelihood to abate the problem. Minor non-physical improvements such as radar speed signs or other signs and pavement striping will be attempted and evaluated for 12 months before major physical changes to the street such as speed tables and chokers are undertaken. Following installation of any minor or major controls, traffic speeds and volumes will be analyzed to compare with those taken prior and may indicate whether or not adjustments are necessary.

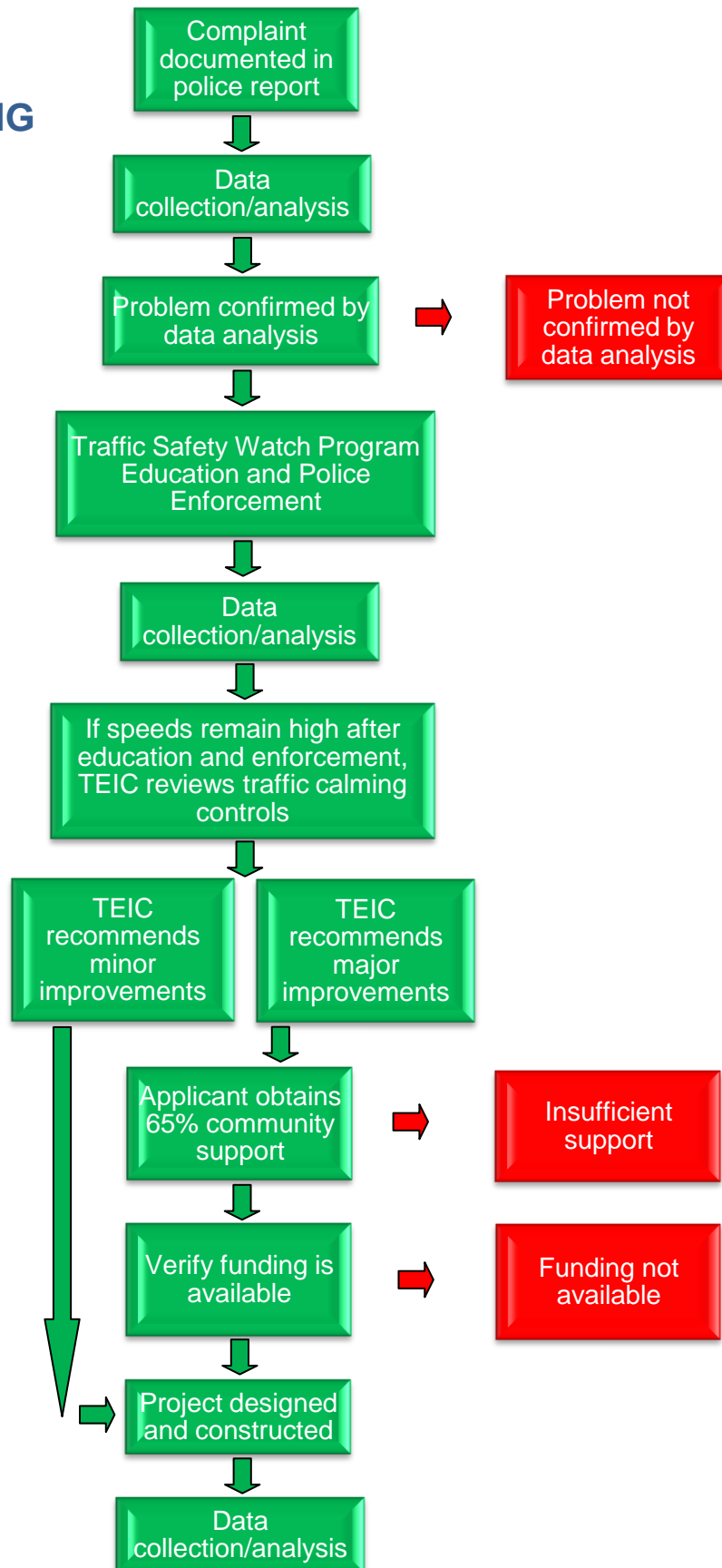
Traffic calming can often impact adjacent streets; therefore, if TEIC identifies major physical traffic calming controls are needed to address speeding, the applicant must obtain 65% support for the project within the impacted area as defined by TEIC and petition the town for the improvements (see petition form page 20). Upon 65% support for the project, funding is verified and design is initiated. If minor improvements such as signs and striping can be implemented, the 65% community support is not required, and the project would be scheduled for installation.

TRAFFIC VOLUMES

Traffic volumes will determine the appropriate traffic calming measures as follows:

- Fewer than 600 vehicles per day
 - Education
 - Enforcement
 - Minor non-physical measures
- 600- 4,000 vehicles per day
 - Education
 - Enforcement
 - Minor non-physical measures
 - Major physical measures
- More than 4,000 vehicles per day
 - Education
 - Enforcement
 - Minor non-physical measures
 - Network analysis or other alternative actions

TRAFFIC CALMING PROCESS FLOW CHART



TRAFFIC CALMING MEASURES- MINOR CONTROLS

RADAR TRAILERS AND SPEED DISPLAY SIGNS

Description: Mobile radar trailers and permanently mounted radar signs remind motorists of their actual travel speed and are especially effective if the speed limit is also posted.

Advantages: Can be less expensive than long term police enforcement. Mobile signs can be relocated. Permanently mounted signs are especially effective in school zones. No impact to emergency response times.

Disadvantages: Only effective for one direction of travel. May only be effective for short distances

Cost: \$5,000 - \$10,000 per unit.



CENTERLINE AND EDGE STRIPING

Description: Can be used to delineate on-street parking and visually narrow travel lanes, thereby inducing drivers to reduce speed.

Advantages: Inexpensive. No impact to emergency response times. Can also be used to create bicycle lanes.

Disadvantages: Regular maintenance required.

Cost: \$2 - \$4 per linear foot



RAISED PAVEMENT MARKERS

Description: Markers of variable construction often reflectorized for enhanced visibility. If installed in series along the centerline or edge line, alerts the driver when deviating from the travel lane. Rumble strips placed laterally across the roadway provide advance warning of a potential danger ahead.

Advantages: Inexpensive. No impact to emergency response times.

Disadvantages: Subject to damage from snow plows. Noise and vibration.

Cost: \$2 - \$7 per marker.



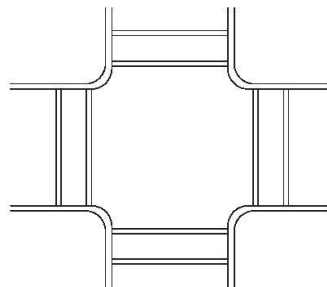
HIGH VISIBILITY CROSSWALKS

Description: High visibility crosswalks are white, high intensity retro reflective patterns. They can be combined with textured, colored pavement to increase driver awareness.

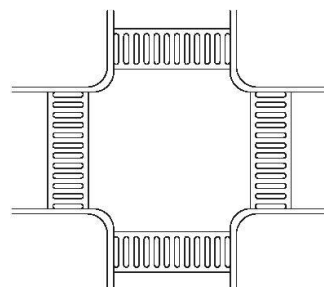
Advantages: Inexpensive. No impact to emergency response times.

Disadvantages: May provide pedestrians with a false sense of security when used at mid-block locations.

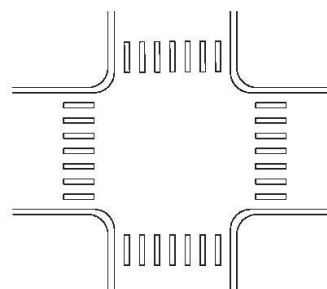
Cost: \$300 - \$500 per crosswalk per lane



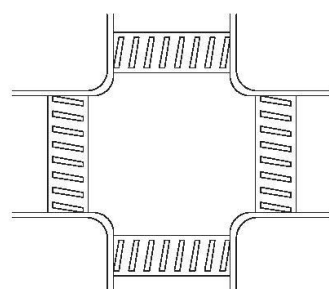
Standard



Ladder



Block



Diagonal

PAVEMENT MARKING LEGENDS

Description: On-pavement markings reinforce posted speed signs or special wording may remind motorists of particular conditions such as crosswalks and schools.

Advantages: Inexpensive. No interruption to emergency vehicles. Easy to implement. No increase in noise. No affect on vehicle operation.

Disadvantages: May not be effective in reducing speeds. Minor maintenance costs.

Cost: \$50 per letter or number.



SIGNS

Description: Turn prohibition signs are posted to restrict movement through a given area and to limit travel in certain directions. Warning signs reinforce penalties associated with traffic violations.

Advantages: Inexpensive to install. Turn restrictions can be limited to certain hours.

Disadvantages: Turn restrictions may divert additional traffic onto nearby streets. Requires enforcement.

Cost: \$100 - \$200 per sign.



TRAFFIC CALMING MEASURES- MAJOR CONTROLS

SPEED TABLES

Description: Typically 3-4 inches high and 14 to 22 feet long trapezoidal shape of variable materials covering the full width of roadway. The flat top is long enough for the wheelbase of a car to ride on and the ramps are sloped more gently than speed humps to allow higher speeds. Place no closer than 300 feet apart or 300 feet from stop signs or traffic signals.

Advantages: Commonly preferred over speed humps, yet effective for reducing speeds. Compatible with pedestrian and bicycle movements. May decrease cut through traffic.

Disadvantages: Can be expensive to build and maintain, and drainage must be carefully considered. Slows emergency vehicles. Vehicular damage and or injury to vehicle occupants may occur if crossed too fast.

Cost: \$3,000 - \$6,000 depending on materials.



RAISED CROSSWALKS

Description: Similar to speed tables with appropriate crosswalk markings and signage. Placement distance requirements are similar to speed tables.

Advantages: Effective at reducing speeds. Increases visibility of pedestrians and slows traffic at conflict point with pedestrians. May decrease cut through traffic.

Disadvantages: Can be expensive to build and maintain, and drainage must be carefully considered. Vehicular damage and or injury to vehicle occupants may occur if crossed too fast. Slows emergency vehicles.

Cost: \$3,500 - \$6,500 depending on materials.



CROSSWALK REFUGES

Description: Raised median in middle of roadway with a walkway cut providing protection from traffic.

Advantages: Reduces speeds, provides protection for crosswalk users.

Disadvantages: Maintenance. Potential snow plow damage.

Cost: \$5,000 - \$15,000



BUMPOUTS

Description: Narrows road width at intersections to reduce speeds and aid pedestrian crossings.

Advantages: Reduces speeds near intersections. Shortens distances for pedestrians crossing street. Increases green space. No impact to emergency response times.

Disadvantages: Turns are more difficult for large vehicles. Drainage must be carefully considered. Potential snow plow damage.

Cost: \$5,000 per corner



CHOKERS

Description: Used at mid block locations to narrow road width and reduce speeds.

Advantages: Reduces speeds. Increases green space. Creates safer pedestrian crossings. Provides some parking protection.

Disadvantages: Potential drainage problems. Potential snow plow damage. Lost parking spaces.

Cost: \$7,000 - \$10,000



MODIFICATION AND REMOVAL

If a traffic calming measure is found to cause a hazardous condition, the Director of Public Works may unilaterally modify or remove the control. Otherwise, the process for removal of traffic calming is initiated by a petition from the community, similar to petitioning for the installation of traffic calming controls, with 65% of households seeking modifications and/or removal.

In general, traffic calming controls will not be removed before a full assessment of their effectiveness can be evaluated- usually one year. Any petitions for removal shall be reviewed by TEIC before a recommendation can be made to the Town Council, which will ultimately decide whether to modify or remove the controls. TEIC will compare speed and traffic volumes before and after the installation as well as review archives for the circumstances that brought about the initial concerns.

MULTI-WAY STOP SIGNS

Multi-way stop signs are traffic control devices primarily installed to assign right of way at intersections and are not considered to be traffic calming controls. While motorists may slow and stop at approaching intersections where stop signs are installed, studies have shown that beyond the intersection, speeds remain the same, and in some cases, motorists increase speed to make up for lost time. By contrast, traffic calming measures slow motorists along the length of the controls, not just at intersections.

Residents may request that a particular intersection be evaluated for all way stop control due to accident history, traffic volumes, pedestrian crossing safety, or sight distance issues.

ALTERNATIVE FUNDING OPTION

The Town of Herndon has limited resources and may not be able to address every community's engineering project; therefore, the Town will allow communities to implement a program at their own expense under the following circumstances:

- The traffic calming project must be approved by TEIC.
- The community provides funding to the Town for the project.
- DPW oversees the design, construction, and maintenance of the project.

FOR MORE INFORMATION

Questions and concerns may be directed to the Director of Public Works, Herndon Municipal Center, 777 Lynn Street, Herndon, VA 20170, phone 703-435-6856, email [publicworks @herndon-va.gov](mailto:publicworks@herndon-va.gov). Please also visit the Town's website, <http://www.herndon-va.gov/>, for additional information.